



32E13SE0006 2.13099 ATKINSON LAKE

010

2.13099

Atkinson West Claims
Report on Linecutting and
Geological Mapping
Completed During 1989

N.T.S. 32 E/13

Latitude: 49 48'N

Longitude: 79 36'W

January, 1990

Alan O'Connor, B.Sc.



32E13SE0006 2.13099 ATKINSON LAKE

010C

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File Name:Atkinson.rep

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Summary and Recommendations:

The Atkinson West block, which consists of 6 claims located near Atkinson Lake approximately 4.5km west of the Detour Lake-La Sarre winter road, overlies a sequence of metasedimentary rocks, mafic to felsic volcanics and mafic intrusives. A geological survey carried out during the summer of 1989 failed to locate any outcrop.

To further evaluate this property and to define targets for diamond drilling, a program of geophysical surveying is required. A 300 metre/2 hole diamond drill program is also required to test geophysical conductors. The locations of these holes will be based upon the results of the geophysical programs.

Location, Access and Topography:

49 48'N/79 36'W

The project area, located 150km northeast of Cochrane, Ontario and approximately 18km south of the Detour Lake Gold Mine, is covered by N.T.S. map sheet 32 E/13(figs. 1,2). An all-weather gravel road from Cochrane to the Detour Lake Mine site can be used to access the general project area. From the mine site, the claim block can be reached via an old winter road which begins in the La sarre area and ends at the Detour Mine. For summer work, an amphibious, all-terrain vehicle, such as an Argo equipped with wide pad tracks, is the best form of ground transportation. During the winter months, skidders and tracked vehicles may be used to access the property.

Many of the lakes within the project area are amenable to the use of float and ski-equipped fixed wing aircraft which can be brought in from bases in La Sarre, Quebec or Cochrane, Ontario. Furthermore, regularly scheduled flights from Timmins to the Detour mine airstrip are available

Topographically the region is characterized by low relief with much of the area covered by fen and string bog. Outcrop is sparse due to a blanket of overburden and muskeg which extends over a large portion of this region. Vegetation is typical of the boreal forest with much of the region covered by stands of black spruce and small areas of poplar. To date, there has been no harvesting of trees in this vicinity. The area is drained by small creeks and rivers with the Detour River being the largest in the district.

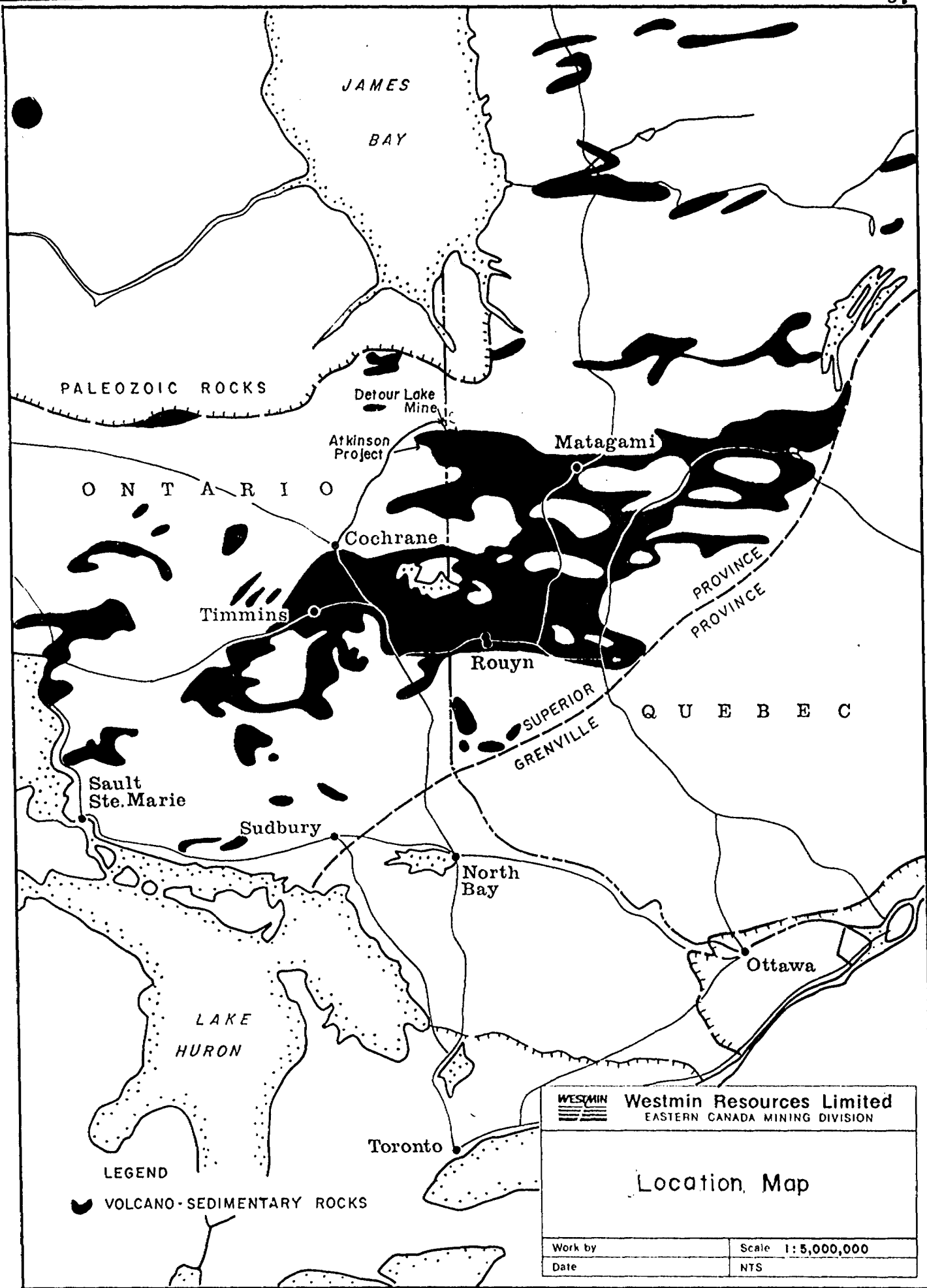


Figure 1

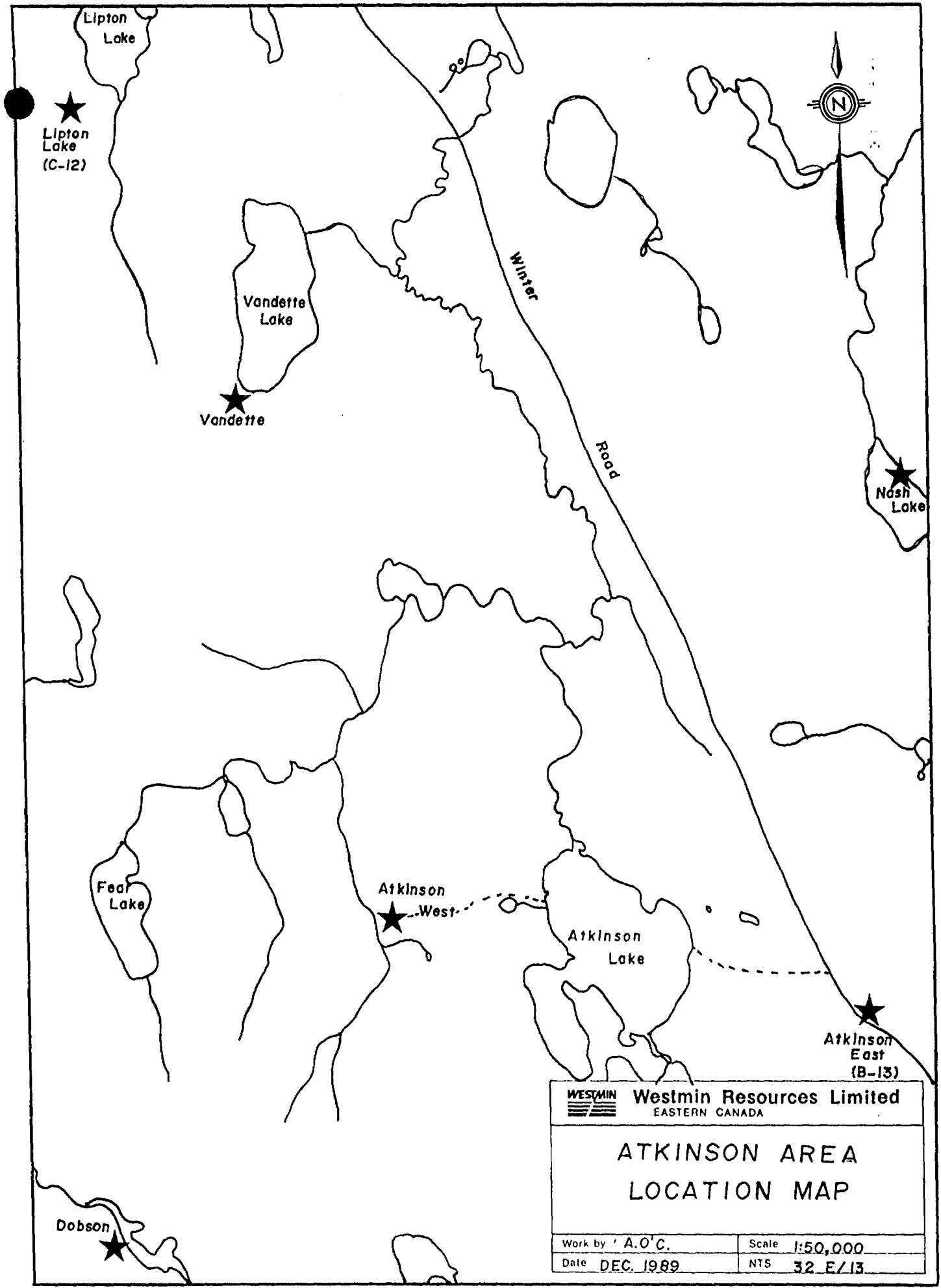


Figure 2.

ATKINSON WEST -PROPERTY STATUS

Location: Atkinson Lake Area (G-1626),
 Porcupine Mining Division, Ontario
 N.T.S. 32-E-13
 Lat. 49 49'15"N
 Long. 79 37'W

Equity: Westmin Mines Limited 100%

<u>Claims</u>	<u>Recording Date</u>	<u>Lease Due</u>	<u>Assessment Work Due</u>	<u>Filed Work</u>
P.1114776	26 June 1989	26 June 1995	26 June 1990	Nil
P.1114777	26 June 1989	26 June 1995	26 June 1990	Nil
P.1114778	26 June 1989	26 June 1995	26 June 1990	Nil
P.1114779	26 June 1989	26 June 1995	26 June 1990	Nil
P.1114780	26 June 1989	26 June 1995	26 June 1990	Nil
P.1114781	26 June 1989	26 June 1995	26 June 1990	Nil

6 claims = 96 ha (240 ac)

Date: 31 July 1989

Atkinson West, Ontario
 Page 1 of 1

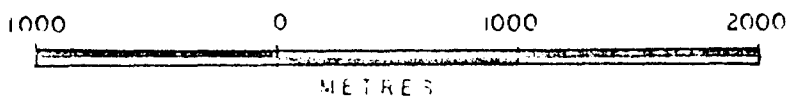
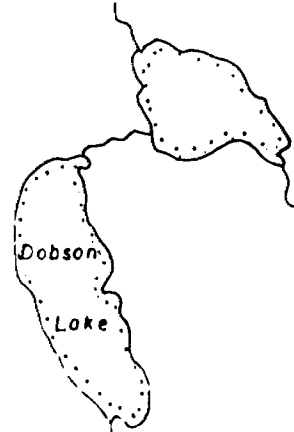


ATKINSON WEST

P	P	P
1114780	1114777	1114776
P	P	P
1114781	1114778	1114779

DOBSON LAKE

P	P	P	P
1090075	1090076	1090077	
P	P	P	P
1090081	1090080	1090079	1090078
P	P	P	P
1090082	1090083	1090084	1090085
P	P	P	P
1090087	1090086	1090088	



5.0 Regional Geology:

The Atkinson area is underlain by the northern belt of a fold supracrustal sequence with the main volcanic-sedimentary sequence occurring to the west in Quebec. The belt, which is Archean in age, has undergone regional and contact metamorphism ranging from upper greenschist to almandine-amphibolite facies rank.

The belt is composed of a metavolcanic-sedimentary sequence with a basal unit of felsic to intermediate volcanics. Overlying the felsic volcanics is a sequence of metasediments followed by mafic to intermediate flows and pyroclastics. Stratigraphically above this unit are interbedded felsic to intermediate volcanics and mafic to intermediate volcanics and metasediments. At the top of the stratigraphic sequence is a unit of metasediments with mafic flows and graphitic tuffs and metasediments which commonly contain anomalous concentrations of sulphides.

The area is surrounded by quartz-monzonite batholiths with a large gabbroic intrusion occurring in the Detour Lake area. Finally, the area possesses several diabase dykes which crosscut all other rocks and structures (Johns, 1982).

5.1 Economic Geology:

The most significant ore deposit in the project area is the Detour Lake gold mine which is located 18km to the north of the property.

The main zone of mineralization of the deposit is hosted within the basal part of the mafic flow sequence, the upper part of the ultramafic zone and within the intermediate and cherty tuff horizon located between the two preceding units. The gold is associated with chalcopyrite in the metavolcanic rocks as well as in the mineralized quartz veins which occur above the main zone (Johns, 1982).

Alteration in the vicinity of the deposit consists of:

- a) talc-carbonate alteration of the ultramafic rocks
- b) chloritic alteration of the basalts
- c) potassic alteration in the cherty tuff
- d) intense biotite alteration of the basalts

Previous Work:

1974: Amoco drilled 2 holes on the property for a total of 436.8 metres.

1982: Getty Canadian Metals conducted ground EM (Max-Min) and magnetometer surveys over the property and completed 772.3 metres of diamond drilling in 4 holes.

1989 Program

During the summer of 1989, a program of linecutting (18.2km) and geological mapping (1:2000) was carried out on the Atkinson Lake property. All six claims in this block were covered by the linecutting and geological survey.

Geology and Physiography: (Fig. 4)

All lines on the Atkinson West grid were traversed, however no outcrop was found. Vegetation consists of:

- a) 65% thick black spruce (diameter breast height >10cm)
- b) 20% sparse, stunted black spruce (diameter breast height <10cm)
- c) 10% fen and string bog
- d) 5% alders

The geology of the Atkinson West grid, as interpreted from previous diamond drilling by Amoco and Getty Canadian Metals, consists of generally east-west trending amphibolites, rhyolites, graphitic metasediments and metasediments. The four holes drilled by Getty Canadian Metals in 1982 (710 m) intersected mainly amphibolites, graphitic metasediments and metasediments. A minor amount of quartz-feldspar porphyry was encountered in the drilling.

Respectfully submitted,



Alan J. O'Connor, B.Sc.
February 7, 1990.



Reviewed

References


Johns, G.W., (1982) Geology of the Burntbush-Detour Lake
Areas. Ontario Geological Survey
Report #199.

Certification

I, Alan J. O'Connor, of 312 St. Clarens Avenue, Toronto, Ontario, M6H 3W2, certify that:

- (1) I hold a Bachelor of Science degree (geology) received in 1985 from the University of Western Ontario.
- (2) I have practised my profession as a project geologist in the mining industry on a full-time basis for four years.
- (3) I have conducted field work on this property, and supervised the geological, geochemical and geophysical work described in the report.
- (4) I have no financial interest in the property.

January, 1990


A. J. O'Connor, B.Sc.



Ministry of
Northern Development
and Mines

DOCUMENT No
W 9006-081



32E13SE0006 2.13099 ATKINSON LAKE

900

Mining Act

Report of Work
(Geophysical, Geological and Geochemical Surveys)

2.13

Reports and maps in duplicate should be submitted to
Mining, Lands Section, Northern Development and Lands Branch.

Type of Survey(s) Geological & Linecutting	Mining Division Porcupine	Township or Area Atkinson Lake Area (G-1626)
Recorded Holder(s) Westmin Mines Limited		Prospector's Licence No. T-4638
Address 25 Adelaide St. East, #1400, Toronto, Ont.		Telephone No. (416)364-8116
Survey Company Westmin Mines Limited		
Name and Address of Author (of Geo-Technical Report) A.O'Connor, 25 Adelaide St.E., Toronto, Ont.M5C 1Y2		Date of Survey (from & to) 02, 07, 89 05, 07, 89

Credits Requested per Each Claim in Columns at right

Mining Claims Traversed (List in numerical sequence)

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic - Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Other Geological Geochemical	40
Man Days Complete reverse side and enter total(s) here	Geophysical - Electromagnetic - Magnetometer - Other Geological Geochemical	Days per Claim
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic Magnetometer Other	Days per Claim

Mining Claim		Mining Claim		Mining Claim	
Prefix	Number	Prefix	Number	Prefix	Number
P	1114776				
	1114777				
	1114778				
	1114779				
	1114780				
	1114781				

FEB 15 1990

ONTARIO GEOLOGICAL SURVEY
ARCHIVE FILE
APR 24 1990

Total miles flown over claim(s):
Date: **13 Feb. 1990**
Recorded Holder or Agent (Signature): *S. Kuprejanov*

Total number of mining claims covered by this report of work: **6**

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in this Report of Work, having performed the work or witnessed same during and/or after its completion and annexed report is true.

Name and Address of Person Certifying:
**S. Kuprejanov, 25 Adelaide St. East, #1400,
Toronto, Ontario M5C 1Y2**
Telephone No.: **(416)364-8116**
Date: **13 Feb. 1990**
Certified By (Signature): *S. Kuprejanov*

For Office Use Only

Total Days Cr. Recorded 240	Date Recorded FEB 15/90	Mining Recorder <i>[Signature]</i>
	Date approved as Record 20 April 90	Provincial Manager, Mining Lands <i>[Signature]</i>

RECEIVED
FEB 15 1990



GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL
TECHNICAL DATA STATEMENT

2.13099

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) Geological and Linecutting

Township or Area Atkinson Lake Area (G-1626)

Claim Holder(s) Westmin Mines Limited

Survey Company Westmin Mines Limited

Author of Report A.J.O'Connor

Address of Author 25 Adelaide St.E., Toronto, Ont.

Covering Dates of Survey 02 July - 05 July 1989
(linecutting to office)

Total Miles of Line Cut 18.2 km

MINING CLAIMS TRAVERSED
List numerically

(prefix) (number)

P 1114776

P 1114777

P 1114778

P 1114779

P 1114780

P 1114781

If space insufficient, attach list

SPECIAL PROVISIONS
CREDITS REQUESTED

DAYS
per claim

Geophysical

ENTER 40 days (includes
line cutting) for first
survey.

--Electromagnetic _____

ENTER 20 days for each
additional survey using
same grid.

--Magnetometer _____

--Radiometric _____

--Other _____

40

Geological _____

Geochemical _____

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: 13 Feb. 1990 SIGNATURE: Shygojanov
Author of Report or Agent

Res. Geol. _____ Qualifications 2.12993

Previous Surveys

File No. Type Date Claim Holder

File No.	Type	Date	Claim Holder

TOTAL CLAIMS 6

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS - If more than one survey, specify data for each type of survey

Number of Stations _____ Number of Readings _____

Station interval _____ Line spacing _____

Profile scale _____

Contour interval _____

MAGNETIC

Instrument _____

Accuracy -- Scale constant _____

Diurnal correction method _____

Base Station check-in interval (hours) _____

Base Station location and value _____

ELECTROMAGNETIC

Instrument _____

Coil configuration _____

Coil separation _____

Accuracy _____

Method: Fixed transmitter Shoot back In line Parallel line

Frequency _____
(specify V.L.F. station)

Parameters measured _____

GRAVITY

Instrument _____

Scale constant _____

Corrections made _____

Base station value and location _____

Elevation accuracy _____

INDUCED POLARIZATION
RESISTIVITY

Instrument _____

Method Time Domain Frequency Domain

Parameters -- On time _____ Frequency _____

-- Off time _____ Range _____

-- Delay time _____

-- Integration time _____

Power _____

Electrode array _____

Electrode spacing _____

Type of electrode _____

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

Corrections made _____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth – include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

Additional information (for understanding results) _____

AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) _____

(specify for each type of survey)

Accuracy _____

(specify for each type of survey)

Aircraft used _____

Sensor altitude _____

Navigation and flight path recovery method _____

Aircraft altitude _____ Line Spacing _____

Miles flown over total area _____ Over claims only _____

GEOCHEMICAL SURVEY - PROCEDURE RECORD

Numbers of claims from which samples taken _____

Total Number of Samples _____

Type of Sample _____
(Nature of Material)

Average Sample Weight _____

Method of Collection _____

Soil Horizon Sampled _____

Horizon Development _____

Sample Depth _____

Terrain _____

Drainage Development _____

Estimated Range of Overburden Thickness _____

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis _____

General _____

ANALYTICAL METHODS

Values expressed in: per cent
p. p. m.
p. p. b.

Cu, Pb, Zn, Ni, Co, Ag, Mo, As, -(circle)

Others _____

Field Analysis (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Field Laboratory Analysis

No. (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Commercial Laboratory (_____ tests)

Name of Laboratory _____

Extraction Method _____

Analytical Method _____

Reagents Used _____

General _____



Westmin Mines Limited

Suite 1400, 25 Adelaide Street East
Toronto, Ontario, Canada
M5C 1Y2
416 364-8116 FAX: 416 364-4920

Mines Westmin Limitée

Bureau 1400, 25, rue Adelaide est
Toronto (Ontario), Canada
M5C 1Y2
(416) 364-8116 FAX: 416 364-4920

PRIORITY POST

February 13, 1990

Land Management Branch
Mining Land Section
Ministry of Northern Development and Mines
880 Bay Street, 3rd Floor
Toronto, Ontario
M5S 1Z8

Dear Sir: RE: ASSESSMENT REPORT ON LINECUTTING AND GEOLOGICAL
MAPPING COMPLETED DURING 1989, ATKINSON WEST CLAIMS

Please find enclosed in duplicate the above mentioned report and a form Technical Data Statement. The form Report of Work has been forwarded to the Mining Recorder Office in Timmins.

Thank you and I hope you will find everything in order.

Yours truly,

WESTMIN MINES LIMITED

A handwritten signature in cursive script, appearing to read "S. Kuprejanov".

(Mrs.) S. Kuprejanov
Administrative Geologist

SK/hmc
Encls.



Instructions

- Please type or print.
- Refer to Section 77, the Mining Act for assessment work requirements and maximum credits allowed per survey type.
- If number of mining claims traversed exceeds space on this form, attach a list.
- Technical Reports and maps in duplicate should be submitted to Mining Lands Section, Mineral Development and Lands Branch:

Report of Work

(Geophysical, Geological and Geochemical Surveys)

Mining Act

Type of Survey(s) Geological & Linecutting	Mining Division Porcupine	Township or Area Atkinson Lake Area (G-1626)
Recorded Holder(s) Westmin Mines Limited 2.13099	Prospector's Licence No. T-4638	
Address 25 Adelaide St. East, #1400, Toronto, Ont.		Telephone No. (416)364-8116
Survey Company Westmin Mines Limited		
Name and Address of Author (of Geo-Technical Report) A.O'Connor, 25 Adelaide St.E., Toronto, Ont.M5C 1Y2		Date of Survey (from & to) 02 May 89 05 07 89

Credits Requested per Each Claim in Columns at right

Mining Claims Traversed (List in numerical sequence)

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic - Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Other Geological Geochemical	40
Man Days Complete reverse side and enter total(s) here	Geophysical - Electromagnetic - Magnetometer - Other Geological Geochemical	Days per Claim
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic Magnetometer Other	Days per Claim
Total miles flown over claim(s).		
Date 13 Feb. 1990	Recorded Holder or Agent (Signature) <i>S. Kuprejanov</i>	

Mining Claim		Mining Claim		Mining Claim	
Prefix	Number	Prefix	Number	Prefix	Number
P	1114776	✓			
	1114777	✓			
	1114778	✓			
	1114779	✓			
	1114780	✓			
	1114781	✓			
COPY					
Total number of mining claims covered by this report of work.				6	

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in this Report of Work, having performed the work or witnessed same during and/or after its completion and annexed report is true.

Name and Address of Person Certifying

S. Kuprejanov, 25 Adelaide St. East, #1400,

Toronto, Ontario M5C 1Y2

Telephone No.

(416)364-8116

Date

13 Feb. 1990

Certified By (Signature)

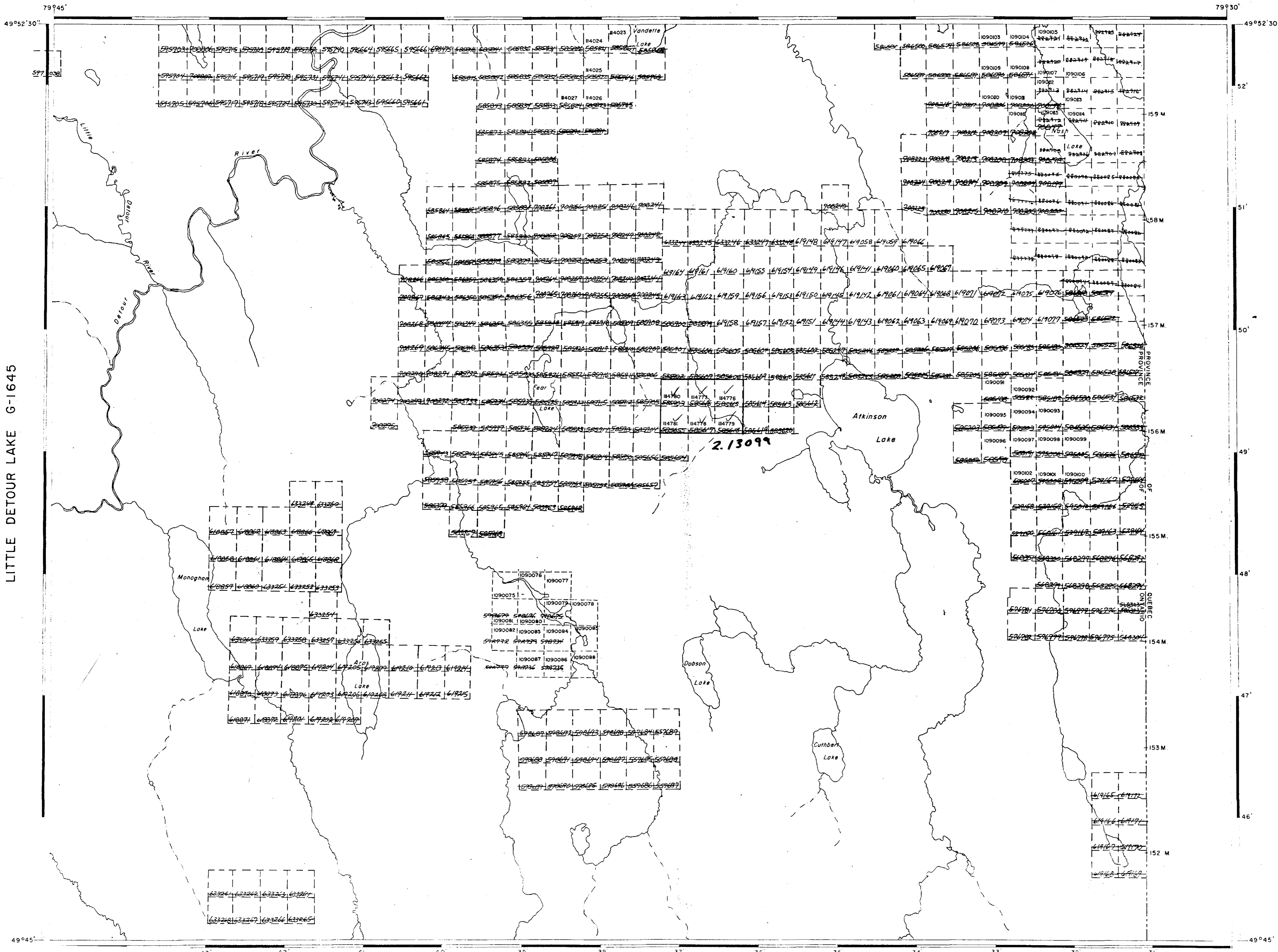
S. Kuprejanov

Received Stamp

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
	Date Approved as Recorded	Provincial Manager, Mining Lands

LOWER DETOUR LAKE G-1647



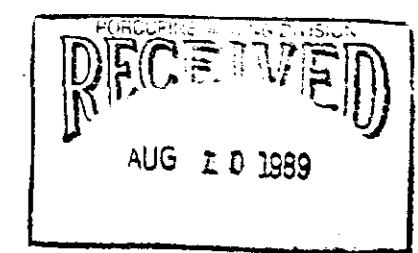
LITTLE DETOUR LAKE G-1645

REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

- M.R.O. - MINING RIGHTS ONLY
- S.R.O. - SURFACE RIGHTS ONLY
- M. + S. - MINING AND SURFACE RIGHTS

Description Order No. Date Disposition File



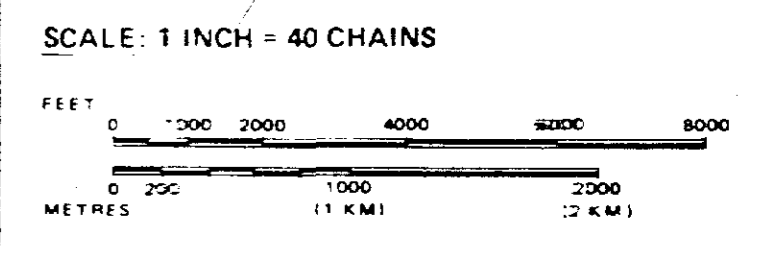
LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
 - TOWNSHIPS, BASE LINES, ETC.
 - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
 - LOT LINES
 - PARCEL BOUNDARY
 - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION OR COMPOSITE PLAN RESERVATIONS
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

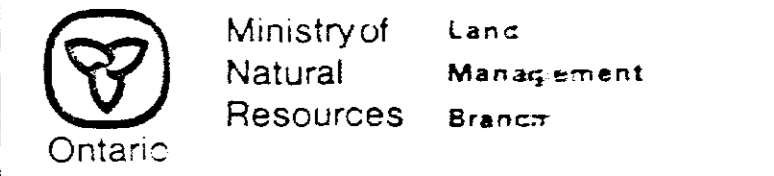
DISPOSITION OF CROWN LANDS

- | TYPE OF DOCUMENT | SYMBOL |
|---------------------------------|--------|
| PATENT, SURFACE & MINING RIGHTS | ● |
| " SURFACE RIGHTS ONLY | ○ |
| " MINING RIGHTS ONLY | ◐ |
| LEASE, SURFACE & MINING RIGHTS | ■ |
| " SURFACE RIGHTS ONLY | ◼ |
| " MINING RIGHTS ONLY | ◻ |
| LICENCE OF OCCUPATION | ▼ |
| ORDER-IN-COUNCIL | OC |
| RESERVATION | ⊙ |
| CANCELLED | ⊗ |
| SAND & GRAVEL | ⊘ |

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 300, SEC. 63, SUBSEC. 1.

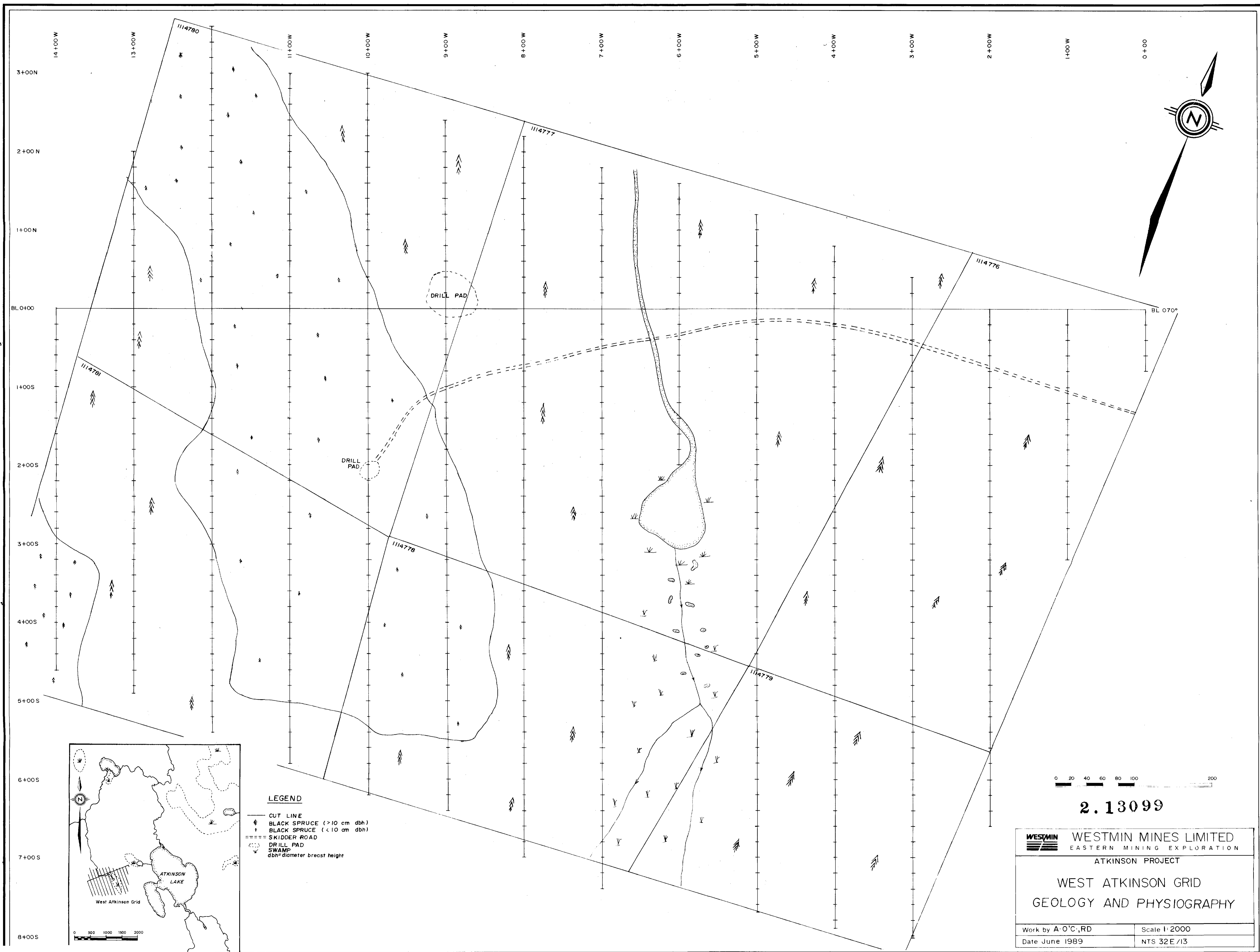


AREA
ATKINSON LAKE
 M.N.R. ADMINISTRATIVE DISTRICT
 COCHRANE
 MINING DIVISION
 PORCUPINE
 LAND TITLES / REGISTRY DIVISION
 COCHRANE



Date: DECEMBER 982
 Name: G-1626
 Received March 19/89





0 20 40 60 80 100 200

2.13099

	WESTMIN MINES LIMITED EASTERN MINING EXPLORATION	
	ATKINSON PROJECT	
WEST ATKINSON GRID GEOLOGY AND PHYSIOGRAPHY		
Work by A. O'C., RD	Scale 1:2000	
Date June 1989	NTS 32E/13	

- LEGEND**
- CUT LINE
 - ♣ BLACK SPRUCE (>10 cm dbh)
 - ♠ BLACK SPRUCE (<10 cm dbh)
 - SKIDDER ROAD
 - DRILL PAD
 - ⊞ SWAMP
 - dbh = diameter breast height

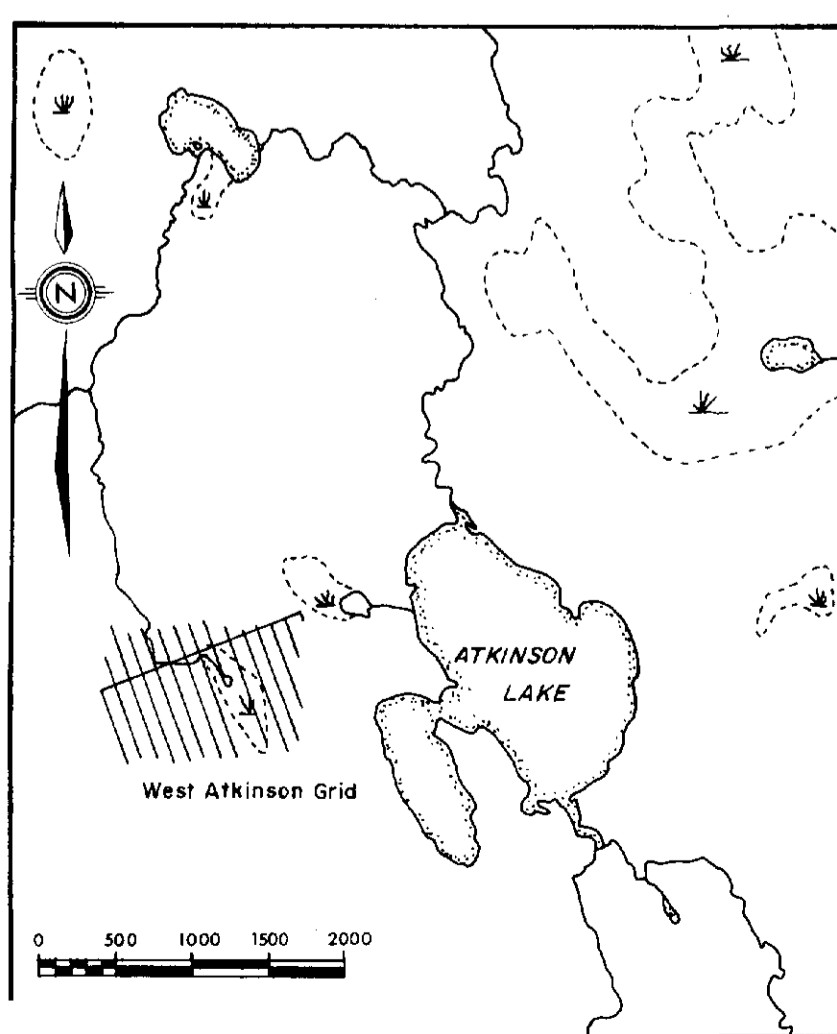


Figure 4